

Notice of Allowability

Application No.

10/614,871

Examiner

Zachary C. Tucker

Applicant(s)

TAKEYAMA ET AL.

Art Unit

1624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☐ This communication is responsive to _____.
2. ☒ The allowed claim(s) is/are The single claim.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 09/529,817.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 9Jul03
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material

5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

JAMES O. WILSON

SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1600

EXAMINER'S AMENDMENT

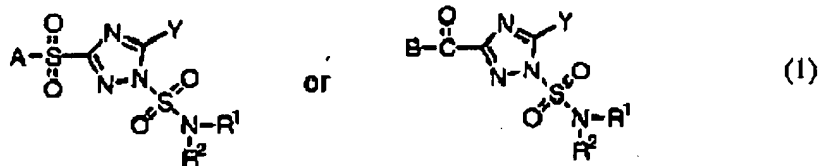
An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given on 6 December 2005, in a telephone voicemail message from applicants' counsel Joel S. Armstrong. Mr. Armstrong's call was pursuant to an initial telephone call from the examiner on 1 December 2005 in which he inquired whether the changes found in the following amendment would be acceptable to applicants, in order to allow the instant application to pass to be passed to issue. On 6 December 2005, Mr. Armstrong provided by facsimile a copy of the claim, which is allowed, as follows:

IN THE CLAIM:

The single claim is replaced with the following amended claim.

1. (Currently Amended) A process for producing a sulfamoyl compound of the formulae (1):



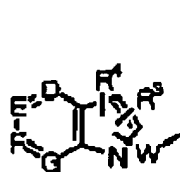
wherein

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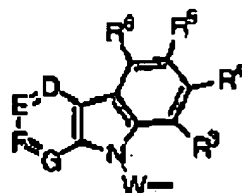
R^1 and R^2 are each independently C_{1-4} alkyl, or R^1 and R^2 together are C_{4-6} alkylene or C_{4-6} alkyleneoxy,

Y is H, halogen, C_{1-8} alkyl, C_{1-4} alkoxy, C_{1-8} alkylthio, C_{1-8} haloalkyl, C_{1-8} haloalkoxy or C_{1-8} haloalkylthio,

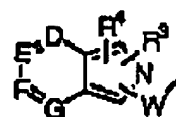
A is



A-1



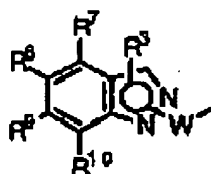
A-2



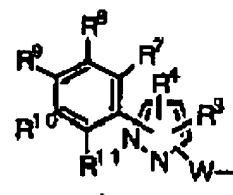
A-3



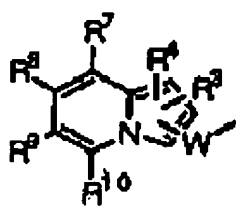
A-4



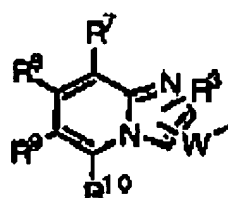
A-5



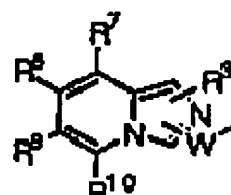
A-6



A-7

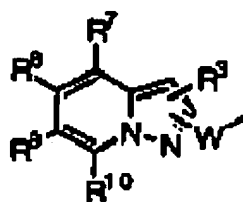


A-8



A-9

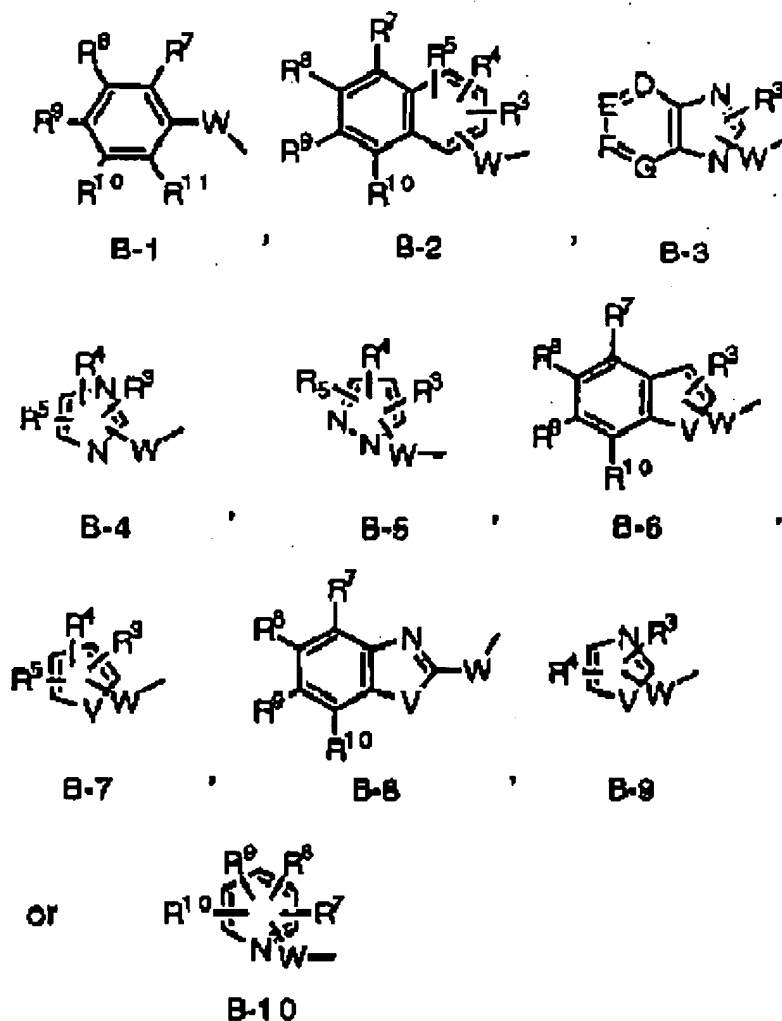
or



A-10

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B is A-1 to A-10, or



W is a chemical bond or O,

V is O or S,

D, E, F and G are each independently N, CR⁷, CR⁸, CR⁹ or CR¹⁰, and

R³, R⁴, R⁵, R⁶, R⁷, R⁸, R⁹, R¹⁰ and R¹¹ are each independently H, C₁₋₈ alkyl, C₃₋₈ cycloalkyl, C₂₋₈ alkenyl, C₃₋₈ cycloalkenyl, C₂₋₈ alkynyl, C₁₋₈ alkoxy, C₃₋₈ cycloalkyloxy, C₅₋₈ cycloalkenyloxy, C₂₋₈ alkenyloxy, C₂₋₈ alkynyloxy, C₁₋₈ alkylthio, C₃₋₈ cycloalkylthio, C₅₋₈

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cycloalkenylthio, C₂₋₈ alkenylthio, C₂₋₈ alkynylthio, C₁₋₈ haloalkyl, C₁₋₈ haloalkoxy, C₁₋₈ haloalkylthio, C₂₋₈ haloalkenyl, C₂₋₈ haloalkenyloxy, C₂₋₈ haloalkenylthio, C₂₋₈ haloalkynyl, C₂₋₈ haloalkynyloxy, C₂₋₈ haloalkynylthio, phenyl which may be substituted (the kinds of substituent include halogen, C₁₋₈ alkyl, C₁₋₈ haloalkyl, C₁₋₈ alkoxy, C₁₋₈ haloalkoxy, C₁₋₈ alkylthio, C₁₋₈ haloalkylthio, C₁₋₆ alkylsulfoxyl, C₁₋₆ alkylsulfonyl, CN, NO₂ and C₁₋₆ alkoxycarbonyl, the number of the substituents is 1 to 5, and the substituents may be identical or different), phenyl C₁₋₄ alkyl which may be substituted, benzylthio which may be substituted, benzyloxy which may be substituted, phenoxy C₁₋₄ alkyl which may be substituted, phenoxy which may be substituted, phenylthio C₁₋₄ alkyl which may be substituted, phenylthio which may be substituted, benzoyl which may be substituted, benzoyl C₁₋₄ alkyl which may be substituted, benzoyloxy which may be substituted, benzoyloxy C₁₋₄ alkyl which may be substituted, naphthyl which may be substituted, 5 or 6 membered heterocyclic ring which may be substituted, C₁₋₈ hydroxyalkyl, C₁₋₈ hydroxyhaloalkyl, C₁₋₆ alkoxy C₁₋₄ alkyl, C₁₋₆ haloalkoxy C₁₋₄ alkyl, C₁₋₆ haloalkylthio C₁₋₄ alkyl, C₁₋₁₀ dialkoxy C₁₋₄ alkyl, C₁₋₃ alkylenedioxy C₁₋₄ alkyl, C₁₋₆ alkylthio C₁₋₄ alkyl, C₁₋₁₀ dialkylthio C₁₋₄ alkyl, C₁₋₃ alkylenedithio C₁₋₄ alkyl, C₁₋₆ alkoxycarbonyl, C₁₋₆ haloalkoxycarbonyl, C₁₋₆ alkoxyoxalyl, CHO, CO₂H, C₁₋₆ alkoxycarbonyl C₁₋₄ alkyl, C₁₋₆ haloalkoxycarbonyl C₁₋₄ alkyl, NH₂, C₁₋₆ alkylamino, C₁₋₆ alkylcarbonylamino, C₁₋₆ alkylcarbonylamino C₁₋₄ alkyl, C₁₋₆ haloalkylcarbonylamino, C₁₋₆ haloalkylcarbonylamino C₁₋₄ alkyl, C₁₋₆ alkoxycarbonylamino, C₁₋₆

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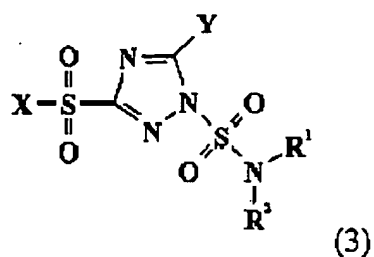
alkoxycarbonylamino C₁₋₄ alkyl, C₁₋₆ alkylsulfonylamino, C₁₋₆ alkylsulfonylamino C₁₋₄ alkyl, C₁₋₆ haloalkylsulfonylamino, C₁₋₆ haloalkylsulfonylamino C₁₋₄ alkyl, C₁₋₆ dialkylamino, C₁₋₆ dialkylamino C₁₋₄ alkyl, C₁₋₆ dialkylaminocarbonyl, C₁₋₆ dialkylaminocarbonyl C₁₋₄ alkyl, C₂₋₆ alkyleneimino, C₂₋₆ alkyleneimino C₁₋₄ alkyl, C₂₋₆ alkyleneiminocarbonyl, C₂₋₆ alkyleneiminocarbonyl C₁₋₄ alkyl, C₁₋₆ alkylcarbonyl, C₁₋₆ alkylcarbonyloxy, C₁₋₆ haloalkylcarbonyl, C₁₋₆ haloalkylcarbonyloxy, C₁₋₆ alkylcarbonyl C₁₋₄ alkyl, C₁₋₆ alkylcarbonyloxy C₁₋₄ alkyl, C₁₋₆ haloalkylcarbonyl C₁₋₄ alkyl, C₁₋₆ haloalkylcarbonyloxy C₁₋₄ alkyl, hydroxyimino C₁₋₄ alkyl, C₁₋₆ alkoxyimino C₁₋₄ alkyl, C₁₋₆ alkylcarbonyloxyimino C₁₋₄ alkyl, C₁₋₆ alkylsulfonyloxyimino C₁₋₄ alkyl, C₁₋₆ alkylsulfoxy, C₁₋₆ haloalkylsulfoxy, C₁₋₆ alkylsulfoxy C₁₋₄ alkyl, C₁₋₆ haloalkylsulfoxy C₁₋₄ alkyl, C₁₋₆ alkylsulfonyl, C₁₋₆ haloalkylsulfonyl, C₁₋₆ alkylsulfonyl C₁₋₄ alkyl, C₁₋₆ haloalkylsulfonyl C₁₋₄ alkyl, C₁₋₆ alkylsulfonyloxy, C₁₋₆ haloalkylsulfonyloxy, C₁₋₆ alkylsulfonyloxy C₁₋₄ alkyl, C₁₋₆ haloalkylsulfonyloxy C₁₋₄ alkyl, C₁₋₆ haloalkoxysulfonyl, C₁₋₆ haloalkoxysulfonyl C₁₋₄ alkyl, C₁₋₆ dialkylsulfamoyl, C₁₋₆ dialkylsulfamoyl C₁₋₄ alkyl, C₁₋₆ alkoxysulfonyl, C₁₋₆ alkoxysulfonyl C₁₋₄ alkyl, C₂₋₆ cyanoalkyl, CN, C₁₋₆ thiocarbamoyl, C₁₋₆ nitroalkyl, NO₂ or halogen, or two of R³, R⁴, R⁵, R⁶, R⁷, R⁸, R⁹, R¹⁰ and R¹¹ together are C₁₋₃ alkylendioxy which may be substituted, or C₃₋₆ alkylene,

which comprises reacting a compound of the formula (2)

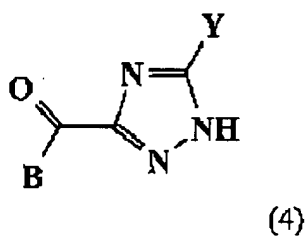


wherein A has the same meaning as defined above,

with a compound of the formula (3)



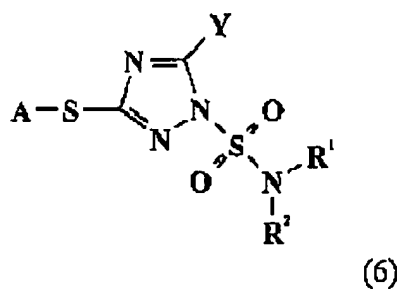
wherein R^1 , R^2 and Y have the same meanings as defined above, and X is a halogen;
reacting a compound of the formula (4)



wherein B and Y have the same meanings as defined above,
with a compound of the formula (5)



wherein R^1 and R^2 have the same meanings as defined above and X is halogen; or
a compound of the formula (6)



wherein R^1 , R^2 , A and Y have the same meanings as defined above,
with an oxidizing agent,

wherein the phrase "which may be substituted" means that optional inclusion of one or more substituents selected from the group consisting of halogen, C₁₋₈ alkyl, C₁₋₈ haloalkyl, C₁₋₈ alkoxy, C₁₋₈ haloalkoxy, C₁₋₈ alkylthio, C₁₋₈ haloalkylthio, C₁₋₆ alkylsulfoxy, C₁₋₆ alkylsulfonyl, CN, NO₂ and C₁₋₆ alkoxycarbonyl, the number of the substituents is 1 to 5, and the substituents may be identical or different).

Allowable Subject Matter

The single claim is allowed, as amended and in the fashion shown in the Examiner's Amendment attached herewith.

The following is an examiner's statement of reasons for allowance:

A process according to the single claim is not known from or taught in the prior art, as was found in a search of the claimed subject matter. Sulfamoyl compounds of the formulae (1), as specified in the instant claim, are remarkable for the substituent "A" or "B" in the structure diagram.

US 5,528,361 (to Lopez) is relevant prior art for its disclosure of a family of 1,2,4-triazole compounds, which are herbicides, and a process for making the same. Lopez's compounds, however, differ from those made by the instantly claimed process in that at the 1-position on the triazole ring (a nitrogen atom), a carboxamide group is present, which is not permitted in sulfamoyl compounds of the formula (1). Columns 4 and 5 of Lopez teach a process of making the compounds, which entails reaction of a carbamoyl halide with the appropriate 3-sulfamoyl triazole compound, resulting in substitution of a carboxamide group at the 1-position of the triazole compound.

US 5,527,818 (Goh et al) is close prior art as well. The Goh et al patent discloses 1,2,4-triazole sulfamoyl compounds, which are fungicides. Goh et al compounds are different from sulfamoyl compounds according to formulae (1) of the instant claim, however, in that the group "A" at the 5-position of the triazole ring in formulae (1) compounds is not permitted to be a phenyl or naphthyl group when the formula (1) compound is sulfonyl-substituted at the 5-position. Goh et al only teach substituted phenyl or naphthyl at the 5-position of the triazole ring. The manner of

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making the compounds taught in Goh et al is analogous to the second claimed embodiment in the instant claim.

JP 7-215971 (Furusato et al), which is cited in the Information Disclosure Statement filed 9 July 2003, discloses agricultural and horticultural antibacterial agents similar to those according to formula (1) compounds produced by the instantly claimed process. Furusato et al compounds differ from those made by the process according to the instant claim in that the pyrazolesulfonamide group at the 5-position of the 1,2,4-triazole ring is only permitted to be substituted by H, alkyl, halogen or nitro, as opposed to "A" in formula (1), when pyrazole, must be substituted by at least one phenyl ring, which is not suggested in the Furusato et al publication.

Thus, a process according to the instant claim is deemed novel and unobvious in light of the closest prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

All Post-Allowance Correspondence concerning this application must be mailed to:


Mail Stop Issue Fee
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Or you can fax them to the Office of Patent Publications at 703-872-9306, in order to expedite the handling of such correspondence as amendments under 37 CFR 1.312; information disclosure statements, and formal drawings. Sending Post-Allowance papers to Technology Center 1600 will only cause delays in matching papers with the case.

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For information concerning status of correspondence sent after receipt of the Notice of Allowance, please contact the Correspondence Branch at (703) 305-8027. The Notice of Allowance also has an insert containing contact information on other items, including Issue Fees, receipt of formal drawings and the status of the application.

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A handwritten signature in black ink, appearing to be "Zal" followed by a horizontal line.A handwritten signature in black ink, appearing to be "James O. Wilson" followed by a horizontal line.

JAMES O. WILSON
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1600